

COATING THICKNESS MEASUREMENT

Industry | Laboratory | Quality Assurance



PROFESSIONAL MEASURING

2025

SAUTER Pictograms



Adjusting program (CAL)
For quick setting of the instrument's accuracy. External adjusting weight required



Calibration block
Standard for adjusting or correcting the measuring device



Peak hold function
Capturing a peak value within a measuring process



Scan mode
Continuous capture and display of measurements



Push and Pull
The measuring device can capture tension and compression forces



Length measurement
Captures the geometric dimensions of a test object or the movement during a test process



Focus function
Increases the measuring accuracy of a device within a defined measuring range



Internal memory
To save measurements in the device memory



Data interface RS-232
Bidirectional, for connection of printer and PC



Profibus
For transmitting data, e.g. between scales, measuring cells, controllers and peripheral devices over long distances. Suitable for safe, fast, fault-tolerant data transmission. Less susceptible to magnetic interference



Profinet
Enables efficient data exchange between decentralised peripheral devices (balances, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible



Data interface USB
To connect the measuring instrument to a printer, PC or other peripheral devices



Bluetooth* data interface
To transfer data from the balance/measuring instrument to a printer, PC or other peripherals



WIFI data interface
To transfer data from the balance/measuring instrument to a printer, PC or other peripherals



Data interface infrared
To transfer data from the measuring instrument to a printer, PC or other peripheral devices



Control outputs (optocoupler, digital I/O)
To connect relays, signal lamps, valves, etc.



Analogue interface
To connect a suitable peripheral device for analogue processing of the measurements



Analogue output
For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)



Statistics
Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.



PC Software
To transfer the measurement data from the device to a PC



Printer
A printer can be connected to the device to print out the measurement data



Network interface
For connecting the scale/measuring instrument to an Ethernet network



KERN Communication Protocol (KCP)
It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems



GLP/ISO record keeping
of measurement data with date, time and serial number. Only with SAUTER printers



Measuring units
Weighing units can be switched to e.g. non-metric. Please refer to website for more details



Measuring with tolerance range (limit-setting function)
Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model



Protection against dust and water splashes IPxx
The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989 +A1:1999+A2:2013



ZERO
Resets the display to "0"



Battery operation
Ready for battery operation. The battery type is specified for each device.



Rechargeable battery pack
Rechargeable set



Integrated power supply unit
Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US on request



Motorised drive
The mechanical movement is carried out by an electric motor



Motorised drive
The mechanical movement is carried out by a synchronous motor (stepper)



Fast-Move
The total length of travel can be covered by a single lever movement



Conformity assessment
Models with type approval for construction of verifiable systems



DAkkS calibration possible
The time required for DAkkS calibration is shown in days in the pictogram



Factory calibration (ISO)
The time required for factory calibration is specified in the pictogram



Package shipment
The time required for internal shipping preparations is shown in days in the pictogram



Pallet shipment
The time required for internal shipping preparations is shown in days in the pictogram

SAUTER Models A-Z

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SAUTER Hotlines



Technical questions about our products?

You will find assistance here quickly: +49 7433 9933 - ...

Service Hotline

for general technical questions about your SAUTER product

→ 199

SAUTER Measuring Instruments

for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software

→ 555

Industrial Scales

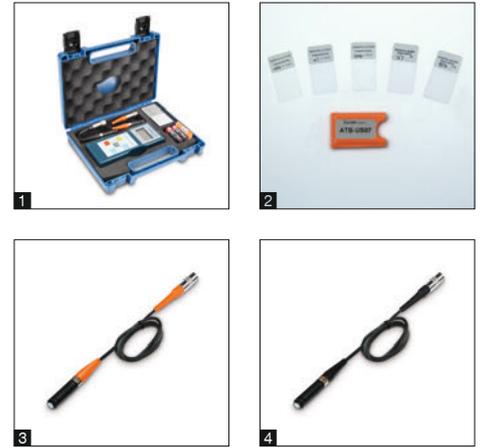
for all technical questions concerning our basic scales (laboratory & industry), pocket balances, school balances, bench scales, price-computing scales, platform scales, counting scales, counting systems, floor scales, pallet truck scales, crane scales, veterinary scales

→ 333

System Solutions Industry 4.0

for all technical questions concerning the interlocking of the latest information and communication technology with our scales, load cells and measuring devices as well as questions about KERN software

→ 200



Practical measuring device for measuring the thickness of layers for daily use

Features

- External sensor for difficult-to-access measuring points
- Offset-Accur: This function allows you to adjust the instrument precisely on the locally measured range by a two-point calibration. This results in a superior accuracy of 1 % (or less) of the measured value
- Selectable measuring units: μm , inch (mil)
- Auto-Power-Off
- Type F: Non-magnetic coatings on iron and steel
- Type N: Coatings on non-magnetic metals
- Base plate and calibration foils included
- **1** Delivered in a robust carrying case
- SAUTER TB 2000-0.1F: Specifically designed for the automobile industry, Precision: Standard 3 % of measured value

Technical data

- Measuring precision:
 - Standard: 3 % of measured value
 - Offset-Accur: 1 % of measured value
- Smallest sample surface (radius)
 - Type F
 - Convex: 1,5 mm
 - Flat: 6 mm
 - Concave: 25 mm
 - Type N
 - Convex: 3 mm
 - Flat: 6 mm
 - Concave: 50 mm
- Minimum thickness of base material: 300 μm
- Overall dimensions WxDxH 161x69x32 mm
- Battery operation, batteries standard (4x1.5 V AAA)
- Net weight approx. 0,75 kg

Accessories

- **2** Calibration foils for increased measuring accuracy (covers the range from 20 up to 2000 μm , with < 3 % tolerance), SAUTER ATB-US07, **€ 115,-**
- **3** External sensor, Type F, SAUTER ATE 01, **€ 116,-**
- **4** External sensor, Type N, SAUTER ATE 02, **€ 125,-**



Model	Measuring range	Readout	Test object	Price excl. of VAT ex works €	Option	
					Factory calibration certificate	
SAUTER	[Max] μm	[d] μm			KERN	€
TB 1000-0.1F	100 1000	0,1 1	Type F	360,-	961-110	167,-
TB 2000-0.1F*	100 2000	0,1 1	Type N	325,-	961-110	167,-
TB 1000-0.1FN	100 1000	0,1 1	Combination instrument Type F / Type N	455,-	961-112	235,-

1 * ONLY WHILE STOCKS LAST



4

Robust coating thickness gauge – compact and easy to use

Features

- Ergonomic design for easy handling
- Data interface RS-232 as standard
- Offset-Accur: This function allows you to adjust the instrument precisely on the locally measured range by a two-point calibration. This results in a superior accuracy of 1 % (or less) of the measured value
- Selectable measuring units: μm , inch (mil)
- Type F: Non-magnetic coatings on iron and steel
- Type N: Coatings on non-magnetic metals
- Base plate and calibration foils included
- **1** Delivered in a robust carrying case

2 SAUTER TC 1250-0.1FN-CAR

- Specifically designed for the automobile industry
- Automatic recognition of measuring mode (F or N): “point and shoot”
- Simple and convenient 1-key operation

Technical data

- Measuring precision:
 - Standard: 3 % of measured value or $\pm 2,5 \mu\text{m}$
 - Offset-Accur: 1 % of measured value or $\pm 1 \mu\text{m}$
- Smallest sample surface (radius)
 - Type F
 - Convex: 1,5 mm
 - Flat: 13 mm
 - Concave: 80 mm
 - Type N
 - Convex:
 - Flat:
 - Concave:
- Minimum thickness of base material: $300 \mu\text{m}$
- Overall dimensions WxDxH 125x65x26 mm
- Battery operation, batteries standard (4x1.5 V AAA)
- Net weight approx. 0,15 kg

Accessories

- Data transfer software, interface cable included, SAUTER ATC-01, **€ 100,-**
- Calibration foils for increased measuring accuracy (covers the range from 20 up to $2000 \mu\text{m}$, with $< 3 \%$ tolerance), SAUTER ATB-US07, **€ 115,-**

STANDARD



OPTION



Model	Measuring range	Readout	Test object	Price excl. of VAT ex works €	Option	
					Factory calibration certificate	
SAUTER	[Max] μm	[d] μm			KERN	€
TC 1250-0.1F	100 1250	0,1 1	Type F	390,-	961-110	167,-
TC 1250-0.1FN	100 1250	0,1 1	Combination instrument Type F/Type N	500,-	961-112	235,-
TC 1250-0.1FN-CAR	100 1250	0,1 1	Combination instrument Type F/Type N	510,-	961-112	235,-

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Ergonomic design and external measuring head for highest ease of use

Features

- External sensor for difficult-to-access measuring points
- Data interface RS-232 as standard
- Offset-Accur: This function allows you to adjust the instrument precisely on the locally measured range by a two-point calibration. This results in a superior accuracy of 1 % (or less) of the measured value
- Selectable measuring units: μm , inch (mil)
- Auto-Power-Off
- Type F: Non-magnetic coatings on iron and steel
- Type N: Coatings on non-magnetic metals
- Base plate and calibration foils included
- **1** Delivered in a robust carrying case

Technical data

- Measuring precision:
 - Standard: 3 % of measured value or $\pm 2,5 \mu\text{m}$
 - Offset-Accur: 1 % of measured value or $\pm 1 \mu\text{m}$
- Smallest sample surface (radius)
 - Type F
 - Convex: 1,5 mm
 - Flat: 6 mm
 - Concave: 50 mm
 - Type N
 - Convex: 1,5 mm
 - Flat: 6 mm
 - Concave: 50 mm
- Minimum thickness of base material: 300 μm
- Overall dimensions WxDxH 131x65x28 mm
- Battery operation, batteries standard (4x1.5 V AAA)
- Net weight approx. 0,10 kg

Accessories

- Data transfer software, interface cable included, SAUTER ATC-01, **€ 100,-**
- Calibration foils for increased measuring accuracy (covers the range from 20 up to 2000 μm , with < 3 % tolerance), SAUTER ATB-US07, **€ 115,-**
- **2** External sensor, Type F, SAUTER ATE 01, **€ 116,-**
- **3** External sensor, Type N, SAUTER ATE 02, **€ 125,-**

STANDARD



OPTION



Model	Measuring range	Readout	Test object	Price excl. of VAT ex works €	Option	
					Factory calibration certificate	
SAUTER	[Max] μm	[d] μm			KERN	€
TE 1250-0.1F	100 1250	0,1 1	Type F	410,-	961-110	167,-
TE 1250-0.1N	100 1250	0,1 1	Type N	450,-	961-110	167,-
TE 1250-0.1FN	100 1250	0,1 1	Combination instrument Type F/Type N	520,-	961-112	235,-



Premium coating thickness gauge for paint layer, lacquer layer etc.

Features

- **1** LCD display, backlit, display of all information at a glance
- Offset-Accur: This function allows you to adjust the instrument precisely on the locally measured range by a two-point calibration. This results in a superior accuracy of 1 % (or less) of the measured value
- Two different measuring modes: single measurement and scan mode for continuous measurement
- Mini Statistics Kit: displays the measured result, the average value and the max and the min value
- Internal data memory for up to 99 values
- Selectable measuring units: μm , inch (mil)
- Data interface RS-232 as standard
- Type F: Non-magnetic coatings on iron and steel
- Type N: Coatings on non-magnetic metals
- Base plate and calibration foils included
- Delivered in a robust carrying case

SAUTER TG

- External sensor for difficult-to-access measuring points

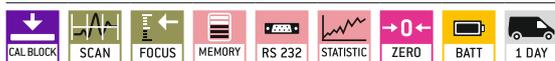
Technical data

- Measuring precision:
 - Standard: 3 % of measured value or $\pm 2,5 \mu\text{m}$
 - Offset-Accur: 1 % of measured value or $\pm 1 \mu\text{m}$
- Minimum thickness of base material: 300 μm
- Overall dimensions W×D×H 126×65×35 mm
- Battery operation, batteries standard (2×1.5 V AAA)
- Net weight approx. 0,10 kg

Accessories

- Data transfer software, interface cable included, SAUTER ATC-01, **€ 100,-**
- Calibration foils for increased measuring accuracy (covers the range from 20 up to 2000 μm , with < 3 % tolerance), SAUTER ATB-US07, **€ 115,-**
- SAUTER TG: External sensor, Type FN, SAUTER ATG 01, **€ 145,-**

STANDARD



OPTION



Model	Measuring range [Max] μm	Readout [d] μm	Test object	Smallest sample surface (radius) mm	Price excl. of VAT ex works €	Option	
						KERN	Factory calibration certificate €
SAUTER TF 1250-0.1FN*	100 1250	0,1 1	Combination instrument Type F/Type N	F: Convex: 1,5/ Concave: 25	600,-	961-112	235,-
SAUTER TG 1250-0.1FN	100 1250	0,1 1	Combination instrument Type F/Type N	N: Convex: 1,5/ Concave: 50	600,-	961-112	235,-

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New-generation measuring coating thickness gauge

Features

- Accurately determines the thickness of coats of paint or varnish on iron or non-iron base material
- Combination of magnetic and eddy current measuring methods enables particularly high levels of precision and flexibility. The base material is detected automatically
- Stable, reliable performance as well as non-destructive measuring
- Measuring range up to 2000 µm
- Low-wear sensor thanks to state-of-the-art technologies
- Single and two-point calibration
- Single and repeated measurements for pass/fail assessment. The three-colour LED display shows the current value attribute (green: qualified, red: below the limit value, yellow: above the limit value)

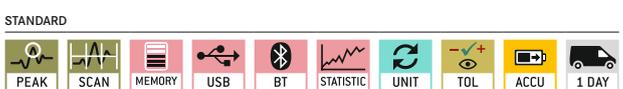
- **1** The display rotates automatically and makes it easier for the user to read the measured values from many different angles, or alternatively it can be locked in place manually
- Selection of functions with automotive mode, voice transmission, Bluetooth App and LED torch
- Bluetooth App included for communication and applications
- **2** Main application areas: Coating thickness measurement on metals in industry and research, for example in the automobile industry, metal processing, painting and inspection
- **3** Delivery in a practical box

Technical data

- Measuring precision: 2 % of [Max]
- Selectable measuring units: µm, inch (mil)
- With internal sensor
- Internal data memory for up to 55 sets of values and 60 cells per set
- Overall dimensions W×D×H 152×65×35 mm
- Net weight approx. 0,20 kg

Accessories

- Calibration foils for increased measuring accuracy (covers the range from 20 up to 2000 µm, with < 3 % tolerance), SAUTER ATB-US07, € 115,-



Model	Measuring range	Readout	Sensor types	Price excl. of VAT ex works €
SAUTER JCT 100	[Max] µm 2000	[d] µm 0,1	FE NFE	445,-

The oldest Precision Balance Factory in Germany

SAUTER GmbH

c/o KERN & SOHN GmbH

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- Technical Glossary
- KERN Dealer Portal
- Practical Filter and Search Functions



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